

20-8179



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D2893-1**Job Sheet 208710****Part No:** D2893-1**Job Qty:** 14 pcs**Part Name:** Support**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 3/31/20**Job Tracking No:****Due Date:** 4/24/20**Created By:** Marie Lajeunesse**Type:** SOLD**Description:**

Note: DWG D2893 REV D IPP: C 02.11.26 Reformat; Added P/O KJ IPP D 06.04.19 removed alodine EC IPP Rev:E
Added priming as per Rev B 07-04-30 JLM IPP F 08.03.19 Re-format EC verified by: DD IPP Rev:G 08-05-15
add QC14 DD verified by:EC IPP Rev:H 11.08.04 as per dwg rev.C ver:EC DWG /IPP Rev. I 19.10.01 New
issue DP Verify DD

Ship Via:**Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter:/	Supplier Lead Time	
100	HAAS 4 Axis	14 pcs	4/23/20	4/23/20	2.00	27.45	HAAS - 1		
							HAAS - 2		
							HAAS - 3		
							HAAS - 4		
120	QC 8	14 pcs	4/23/20	4/23/20	0.00	0.00	QC 8 - 12		 20/04/25
							QC 8 - 14		
							QC 8 - 17		
							QC 8 - 20		
							QC 8 - 25		
							QC 8 - 3		
							QC 8 - 32		
							QC 8 - 33		
							QC 8 - 35		
							QC 8 - 39		
							QC 8 - 4		
							QC 8 - 44		
							QC 8 - 45		
							QC 8 - 49		
							QC 8 - 58		
							QC 8 - 8		
							QC 8 - 9		
							QC 8 - 68		
							QC 8 - 67		
							QC 8 - 1 (A)		
							QC 8 - 47		
							QC 8 - 40		
							QC 8 - 52		
							QC 8 - 23		
							QC 8 - 57		

**Container No:** S273313**Part:** D2893-1**Job No:** 208710**Serial No/Batch:** S273313**Revision:** D**Inspector:****Exp Date:****Instructions:** Various STC's

Dart Aerospace Ltd.
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Date: 04/26/20

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					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
130	Crosstubes - 2 - B4B	14 pcs	4/24/20	0.00 2.33	Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	DAS 41 APR 28 2020
					Crosstubes - 4 - B4B	3-89
140	QC 3	14 pcs	4/24/20	0.00 0.00	QC 3 - 10	
					QC 3 - 13	
					QC 3 - 15	
					QC 3 - 17	
					QC 3 - 18	
					QC 3 - 2	
					QC 3 - 28	
					QC 3 - 3	
					QC 3 - 30	
					QC 3 - 34	
					QC 3 - 36	
					QC 3 - 41	
					QC 3 - 51	
					QC 3 - 58	
					QC 3 - 59	
					QC 3 - 68	
					QC 3 - 9	
					QC 3 - 40	DAS 40 APR 29 2020
					QC 3 - 19	9-89
					QC 3 - 43	
					QC 3 - 24	
					QC 3 - 61	
					QC 3 - 81	
					QC 3 - 82	
					QC 3 - 87	
170	Packaging 3-1 - Stock - B4B	14 pcs	4/24/20	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	DAS 41 APR 29 2020
					Packaging 3 - 22 - B4B	9-89
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	

					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
					Packaging 3 - 37 - B4B	
180 QC 21 - SA	14 pcs	4/24/20	0.00	0.00	QC 21 - SA - 21	
					QC 21 - SA - 70	APR 29 2020
					QC 21 - SA - 53	
					Broussard	

Part Op 100 - (HAAS CNC Vertical Machine) 1-Machine as per Folio FA081
 Descriptions: 120 - (QC8- Inspect parts - second check)
 130 - (Crosstubes) Per note 8 on page 1 of dwg D2893, Prep inner concave surface of support and use DT10660 apply 3M Scotch-Weld as per dwg. *3206999 exp 3/21*
 140 - (QC3- Inspect Part Finish)
 170 - (Identify as per dwg & Stock Location: _____) LOCATION : LG050
 180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
DSK078	D2893-1 Turning Detail	7 pcs (.5 ea)	100-HAAS 4 Axis	<i>S267642</i> 5X <i>S257569</i> 3X

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-HAAS 4 Axis	DSK078	7	12	0

1 SCRAP = S257569

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	2.750 Support	2.985Inches + 0.020 - 0.000	3.005 2.985		
2	2.750 Support	0.440Inches + 0.020 - 0.000	0.460 0.440		
3	2.750 Support	0.125Inches + 0.035 - 0.000	0.160 0.125		
4	2.750 Support	0.040Inches + 0.020 - 0.000	0.060 0.040		
5	2.750 Support	0.188Inches + 0.005 - 0.000	0.193 0.188		
6	2.750 Support	0.125Inches + 0.035 - 0.000	0.160 0.125		
7	2.750 Support	0.140Inches + 0.020 - 0.000	0.160 0.140		
8	2.750 Support	1.360Inches + 0.040 - 0.000	1.400 1.360		
9	2.750 Support	0.040Inches + 0.020 - 0.000	0.060 0.040		
10	2.750 Support	1.190Inches + 0.040 - 0.000	1.230 1.190		
11	2.750 Support	0.010Inches + 0.010 - 0.000	0.020 0.010		
12	2.750 Support	0.053Inches + 0.020 - 0.000	0.073 0.053		
13	2.750 Support	0.240Inches + 0.020 - 0.000	0.260 0.240		
14	2.750 Support	2.518Inches + 0.020 - 0.000	2.538 2.518		
15	2.750 Support	84.390Inches + 6.000 - 0.000	90.390 84.390		
16	2.750 Support	0.261Inches + 0.005 - 0.000	0.266 0.261		
17	2.750 Support	0.053Inches + 0.020 - 0.000	0.073 0.053		

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DART AEROSPACE LTD		Work Order: 208710
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.125	0.160		.137	.136	.14	.14	.137
AB	0.040	0.060		.047	.047	.049	.048	.048
AC	Ø0.260	Ø0.266		.262	.262	.262	.262	.262
AD	Ø0.187	Ø0.143		.189	.189	.189	.189	.189
AE	0.240	0.250		R.25	R.25	R.25	R.25	R.25
AF	1.347	1.407		1.366	1.368	1.366	1.37	1.369
AG	1.200	1.240		1.208	1.208	1.207	1.209	1.210
AH	0.147	0.167		.16	.16	.1585	.16	.1585
AI	2.985	3.005		3.003	3.0025	3.0025	3.001	3.00
AJ	0.400	0.500		.47	.47	.47	.47	.47
AK	4.930	4.990		4.962	4.962	4.950	4.95	4.962
AL	0.125	0.160		.145	.145	.14	.14	.14
AM	R0.053	R0.073		R.063	R.063	R.063	R.063	R.063
AN	R0.240	R0.260		R.25	R.25	R.25	R.25	R.25
AO	R0.021	R0.041		R.032	R.032	R.032	R.032	R.032
AP	0.150	0.180		.16	.158	.163	.165	.16
AQ	0.053	0.073		R.063	R.063	R.063	R.063	R.063
AR	2.302	2.322		2.3175	2.316	2.302	2.302	2.316
AS	0.140	0.160		.152	.155	.151	.153	.1525
AT	0.040	0.060		.052	.052	.052	.051	.053
Accept/Reject								

Measured by: <i>AL</i>	Date: 20/04/21
Audited by: <i>mx</i>	Date: 20/04/25
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	
E	20.02.10	Dwg Rev and Dimensions updated.	MG <i>mg</i>	NP

DART AEROSPACE LTD		Work Order: 208760
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				6	7	8	9	10
HAAS Section								
AA	0.125	0.160		.132	.14	.136	.146	.147
AB	0.040	0.060		.052	.049	.05	.057	.050
AC	Ø0.260	Ø0.266		.262	.262	.262	.262	.262
AD	Ø0.187	Ø0.143		.189	.189	.189	.189	.189
AE	0.240	0.250		R.25	R.25	R.25	R.25	R.25
AF	1.347	1.407		1.37	1.37	1.3715	1.3705	1.3715
AG	1.200	1.240		1.21	1.212	1.214	1.2105	1.2115
AH	0.147	0.167		.1595	.158	.1585	.160	.1595
AI	2.985	3.005		3.00	2.995	2.9965	3.0015	3.001
AJ	0.400	0.500		.47	.47	.47	.47	.47
AK	4.930	4.990		4.963	4.957	4.956	4.956	4.956
AL	0.125	0.160		.14	.14	.14	.14	.14
AM	R0.053	R0.073		R.063	R.063	R.063	R.063	R.063
AN	R0.240	R0.260		R.25	R.25	R.25	R.25	R.25
AO	R0.021	R0.041		R.032	R.032	R.032	R.032	R.032
AP	0.150	0.180		.152	.164	.16	.167	.164
AQ	0.053	0.073		R.063	R.063	R.063	R.063	R.063
AR	2.302	2.322		2.316	2.320	2.320	2.32	2.318
AS	0.140	0.160		.1515	.1515	.153	.154	.153
AT	0.040	0.060		.0515	.052	.053	.0525	.051
Accept/Reject								

Measured by: *DE*

Date: 20/04/22

Audited by: *mx*

Date: 20/04/25

Preliminary Approval:

Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	
E	20.02.10	Dwg Rev and Dimensions updated.	MG <i>mg</i>	<i>DP</i>

DART AEROSPACE LTD		Work Order: 208710
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
HAAS Section								
AA	0.125	0.160		.144	.142	.14	.139	
AB	0.040	0.060		.05	.052	.05	.049	
AC	Ø0.260	Ø0.266		.261	.261	.261	.261	
AD	Ø0.187	Ø0.143		.188	.188	.188	.188	
AE	0.240	0.250		R.25	R.25	R.25	R.25	
AF	1.347	1.407		1.3635	1.375	1.3675	1.366	
AG	1.200	1.240		1.20	1.211	1.2085	1.209	
AH	0.147	0.167		.162	.16	.1585	.158	
AI	2.985	3.005		2.999	3.0	2.999	3.004	
AJ	0.400	0.500		.47	.49	.47	.47	
AK	4.930	4.990		4.963	4.961	4.963	4.961	
AL	0.125	0.160		.14	.14	.14	.14	
AM	R0.053	R0.073		R.063	R.063	R.063	R.063	
AN	R0.240	R0.260		R.25	R.25	R.25	R.25	
AO	R0.021	R0.041		R.032	R.032	R.032	R.032	
AP	0.150	0.180		.170	.1635	.169	.166	
AQ	0.053	0.073		R.063	R.063	R.063	R.063	
AR	2.302	2.322		2.322	2.319	2.322	2.320	
AS	0.140	0.160		.155	.1525	.155	.154	
AT	0.040	0.060		.053	.053	.053	.052	
Accept/Reject								

Measured by: DE	Date: 20/04/25
Audited by: SMX	Date: 20/04/25
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	
E	20.02.10	Dwg Rev and Dimensions updated.	MG	DP

Entered: YR Date: Tue 23/2020



NCR No. 20-8179

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

Job: <u>208710</u> Part No. <u>D2893-1</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☐ Machining ☒ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier Quality ☐			
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Date: 20/04/02 Sequence #: 100 QTY Affected: X 14 MRB (QSI042)
 DAS 9 9-89 20-04-23

Description Work Order Deviation Y origin was not taken properly and was off center	Disposition Scrap destroy and replace	Completed By <u>MMML 20/04/02</u> Lead hand / Supervisor <u>D.A 20-04-23</u> QC / QA Coordinator DAS 9 9-89 <u>20-04-23</u>
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Root Cause Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐	FAULT CATEGORY <table border="0"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☒ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☒ Misaligned/off center</td> <td>☐ Folio/Program</td> <td>☐ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>	☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☒ Positioned Wrong	☐ Bending	☒ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up																											
Other/Details:																													